



## Voice for Change Partnership

### Tracking Government Food Safety Budgets in the Dairy and Horticulture Sectors in Kenya:



#### A Methodological Brief

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## Abbreviations

FAO - The Food and Agriculture Organization of the United Nations

HCD - Horticultural Crops Directorate

KDB - Kenya Dairy Board

NFNSP - National Food and Nutrition Security Policy

NFSCC - National Food Safety Coordination Committee

SUN - Scaling Up Nutrition

SPS - Sanitary and Phytosanitary

UNIDO - United Nations Industrial Development organization

WHO - World Health Organization

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## Acknowledgement

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## 1.0 Introduction

Dairy and horticulture products are major food consumption items in Kenya; hence their safety is a concern for consumers, the food industry, and the regulatory agencies. The Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) defines food safety as all those hazards, whether chronic or acute, that may make food injurious to the health of the consumer (FAO and WHO, 2003). The most important food safety concern in Kenya is foodborne diseases resulting from microorganisms (Oloo, 2010). The products from dairy and horticulture are among the most important implicated food vehicles of foodborne diseases (Tournas, 2005). Many pathogens can contaminate dairy products and cause disease and death, such as *Brucella*, *Campylobacter*, *Listeria monocytogenes*, *Salmonella*, *Shiga toxin* producing *Escherichia coli* and *Shigella* (Gould, 2014). The common moulds associated with horticulture products spoilage include: *Botrytis*, *Alternaria*, *Sclerotinia*, *Colletotrichum*, *Rhizopus*, *Phomopsis*, *Ceratocystis*, *Geothrichum*, *Cladosporium*, *Rhizoctonia*, *Phytophthora*, *Perenospora* (mildew), *Bremia*, *Aspergillus*, *Penicillium*, *Fusarium* and *Mycosphaerella* (Tournas, 2005).

Food safety is a 'public good' concern for any country. Furthermore, increasing trade in food products among many countries results in food safety issues being shared across borders, creating global public "goods" and "bads" (Laurian, 2006). Examples of globally shared food safety risks include acute risks such as microbial pathogens, and chronic risks, such as those arising from pesticide residues or mycotoxins. Food safety is addressed as a global public good through private sector efforts, institutional innovations such as the Sanitary and Phytosanitary (SPS) agreement under the World Trade Organization (WTO), and trade capacity building efforts to improve food safety management for developing country exports (Laurian, 2006).

Frequent public intervention at national level to ensure food safety arises from several public good characteristics. Individual producers or firms of dairy and horticulture products may be unwilling to adequately control a food safety hazard (externality), and therefore the public sector may be needed to enforce controls or to make supporting infrastructure investments. However, although food safety is increasingly a public good, there is likely public underinvestment in it. This is because directing public good investments for greatest national benefit will require an understanding of the potential benefits and costs both within and across borders. Motivation for such investments in public goods may come about through advocacy by civil society organizations

using instruments such as budget and expenditure tracking. Budget and expenditure tracking is an important way of promoting transparency and can be used for advocacy purposes.

The purpose of this brief is to present an approach that can be used to track government budgets on food safety in Kenya. The brief demonstrates how the methodological approach is used to track budgets on dairy and horticulture food safety at national and county levels in Kenya starting from the financial year of 2015 to year, 2018. The methodology was adopted from the work of Scaling Up Nutrition (SUN) Donor Network working group. It presents the three main steps for tracking financial investments in food safety. The SUN Donor Network developed a common methodology to increase accountability and improve the tracking of external development assistance resources aimed at addressing under-nutrition. The three-step approach has been piloted in Sierra Leone for tracking public expenditure on nutrition (see Jones, 2016).

In this brief we demonstrate how to track expenditure on food safety. Two categories of food safety investments are considered: food safety-specific and food safety-supportive expenditures. The food safety-specific category contains expenditure measures that provide direct support to food safety (disease control, laboratory services, extension, etc.), while the food safety-supportive category contains expenditure measures that provide indirect support to the sector and affect rural development at large (education, health, environment and infrastructure). Food safety is mainly determined by quality assurance measures, which can encompass a variety of different and complex interventions (Bokeloh et al., 2009). According to FAO and WHO (2003), the following categories can be considered when it comes to food safety and quality: food regulations and standards, and food control and inspection services. When conceived in this way, the classification of expenditure aims to propose indicators that are as relevant as possible from a food safety perspective.

## **2.0 Data sources**

The national budget data was obtained from the Ministry of Finance and National Treasury website while the county budgets were obtained from the respective county government websites. The five target counties were: Laikipia, Murang'a, Nairobi, Nakuru and Nyandarua.

## 2.1 Required steps in tracking food safety budgets

### 2.1.1 Step one—Identify food safety activities

Identifying food safety activities has two components—identifying the food safety related activities that national and county governments carry out (by line ministries) and identifying how expenditures on these activities are recorded.

Two strategic documents were used to develop the initial impression of what the national and the county governments are doing:

- (i) The National Food and Nutrition Security Policy (NFNSP)—Specifically, chapter 3 of NFNSP 2011 addresses food safety and quality. From this document, three implementing state departments were identified as carrying out activities that have a positive impact on food safety in Kenya:
  - State Department of Agriculture
  - State Department of Livestock
  - State Department of Preventive and Promotive health
- (ii) Draft National Food Policy (2013)—This document delineates the responsibilities of government and the National Food Safety Authority.

In addition, the National Food Safety Coordination Committee (NFSCC), was identified as playing an important coordination role. The committee was established to coordinate inter-agency efforts and to attempt to streamline the implementation of 22 food safety and quality legislations that have been passed through various Acts of Parliament over the years.

**Members of NFSCC include:** Department of Veterinary Services, Department of Livestock Production, Department of Fisheries, Kenya National Bureau of Standards, Kenya Plant Health Inspectorate Services (KEPHIS), National Public Health Laboratory Services (NPHLS), Government Chemist, Kenya Medical Research Institute (KEMRI), University of Nairobi, Tea Board of Kenya, Kenya Agricultural and Livestock Research Organization (KALRO), Kenya Dairy Board and Pest Control Products Board.



**Co-opted Members include:** The World Health Organization (WHO), the Food and Agriculture Organization of the United Nations (FAO), and the United Nations Industrial Development organization (UNIDO).

**2.1.2 Step two—Assess whether activities are food safety specific or sensitive**

Categorization of activities identified in step one as food safety specific or sensitive was done on a county by county basis because the design and objectives of various departments at the county level differ significantly. In some counties two or more departments are combined while in others they are separated.

Food safety specific activities directly target unsafe food as their primary objective through initiatives such as improved laboratory services, disease management and control. Food safety sensitive activities indirectly target unsafe food through addressing one or several of its underlying causes, such as education, public, environment, infrastructure, etc. These underlying causes are commonly associated with unsafe food, but also lead to myriad problems beyond unsafe food. As such, activities targeting the underlying causes of unsafe food are also contributing to other non-food safety related outcomes. Table 1 presents examples of dairy food safety specific interventions while Table 2 outlines the potential dairy food safety sensitive interventions as outlined in the national programmed based budget lines.

**Table 1: Dairy food safety specific interventions**

Area	Examples of dairy food safety specific interventions
Livestock resources and market development support services	Inspection of milk handling premises
Livestock breeding and laboratory services	Analysis of milk samples
Veterinary investigation laboratory services	Analysis of dairy animal diseases
Standards and market access programme	Development of standards and regulations on animal products

**Table 2: Dairy food safety sensitive interventions**

Sector	Examples of dairy food safety sensitive interventions
Energy and Petroleum	Installation of solar refrigeration systems in livestock centres in arid and semi-arid areas
Agriculture	Improved food safety and reduced post-harvest losses
Environmental public health	Laboratory analysis of food and water samples

### 2.1.3 Step three—Allocate a portion of expenditures to dairy food safety

Weighting each food safety sensitive activity individually can be highly complex. It rapidly faces challenges in terms of attribution (can you attribute or isolate an improvement in food safety status to a particular activity?) and data availability (not only on the breakdown of expenditures by activity but also on the breakdown of food safety status outcomes and outputs). To track donor spending on nutrition, the SUN Donor Network methodology also evolved in a similar direction (Jones, 2016). It first attempted to generate a detailed breakdown of projects to allocate a portion between 1% and 100% of expenditure to nutrition. However, after an extensive exercise, they concluded that using 25% (with the provision for 50% and 75% where justified) was most feasible and realistic. This would make the exercise replicable annually and also more transparent, as it was easy to get lost in assumptions and criteria when understanding why a particular percentage was chosen. Following this experience from SUN group, the approach to track dairy and horticulture food safety expenditures at the country and county level will uniformly apply 10% for all food safety-sensitive activities and 100% for all specific food safety activities (Table 3 and 4). This follows an extensive consultation with the key informants from the target counties. In a situation where a budget item is sensitive to both dairy and horticulture, the stakeholder agreed to allocate 5% for each sector to avoid double counting. Borrowing from the pilot work done by SUN in Sierra Leone, the three-step approach calls for expenditure on food sensitive activities to be weighted less than expenditure on specific activities to reflect that food safety is not their sole objective (Jones, 2016).

**Table 3: Dairy food safety specific and sensitive programmes**

Ministry	Programmes	Sub-Programmes	Weighting
Agriculture, Livestock and Fisheries Development	Administration, planning and support services	Agriculture Sector Extension Management (ASEM)	Sensitive
	Livestock resources management and development	Livestock production and management	Sensitive
		Livestock products value addition and marketing	Sensitive
		Animal health and disease management and control	Sensitive
		Food safety and animal products development	Specific
		Livestock breeds improvement services	Sensitive
		Farmers capacity building on dairy value chain	Specific
		Promotion of dairy production, extension and research	Specific

Ministry	Programmes	Sub-Programmes	Weighting
	Veterinary services	Dairy processing plant (flagship)	Specific
		Livestock vaccinations	Sensitive
		Meat inspection & leather development	Sensitive
		Vector control	Specific
		Laboratory services	Specific
	Crop development and management	Extension, research and training	Sensitive
		Land and crop productivity enhancement and management	Sensitive
		Agribusiness and information management	Sensitive
		Soil and feed testing laboratory	Sensitive
	Agribusiness and marketing	Milk marketing (Milk dispensers)	Sensitive
	Trade, Industry and Tourism	Trade development and promotion	Consumer protection and fair-trade practices (metrological laboratory)
Health	Public health and sanitation services	Community-led total sanitation (CLTS)	Sensitive
	Preventive and promotive health-care services	Community health services	Sensitive
		Health promotion	Sensitive
		School health	Sensitive
		Nutrition and dietetics	Sensitive
		Environmental health and sanitation	Sensitive
		Health records and information services	Sensitive
	Health research and development	Health standards, quality assurance & standards	Sensitive
		National quality control laboratories	Sensitive

## Kenya Dairy Board expenditure

The Kenya Dairy Board (KDB) is a regulatory body in the country's dairy industry established in 1998 by an Act of Parliament, the Dairy Industry Act Cap 336. In addition, KDB undertakes developmental and promotional roles to promote the development of Kenya's dairy industry. The primary role of the Board is to ensure quality and safety of milk and milk products for the local and export markets. In the next section we explore the budget items for the Board due to its relevance in dairy food safety. All the programmes and sub-programmes of the Board are considered as specific to dairy food safety.

The list of all the main budget items included:

- Administration expenses

- Board members expenses
- Depreciation and amortization expenses
- Employee costs
- Operating expenses
- Development expenses
- Other expenses
- Capital expenditure

**Table 4: Horticulture food safety specific and sensitive programmes**

Ministry	Programmes	Sub-Programmes	Weighting
<b>Agriculture, Livestock and Fisheries Development</b>	Crop Development and Management	Land and crop productivity enhancement and management	Sensitive
		Irrigation development and management	Sensitive
		Strategic Food Security Service	Sensitive
		Agribusiness and information management	Sensitive
		Farmers capacity building and extension	Sensitive
		Horticultural development and marketing	Specific
		Crop production, marketing and research	Sensitive
		Pack house completion	Sensitive
		Horticulture grading sheds	Specific
		Food security initiatives	Sensitive
		Quality assurance and monitoring of outreach services	Sensitive
	Agricultural research and training	Sensitive	
	General administration planning and support services	Agricultural policy, legal and regulatory frameworks	Sensitive
		Agricultural planning and financial management	Sensitive
Agribusiness and Information Management			
Agribusiness and Information Management	Agribusiness and market development	Sensitive	
	Agricultural information management	Sensitive	
<b>Trade, Industry and Tourism</b>	Agribusiness and marketing	Horticulture development and marketing	Specific
		Multi-fruit processing plant and marketing	Specific
		Avocado marketing programme	Specific
		Banana marketing programme	Specific

## Concluding remarks

The budget tracking methodology used has two main advantages. First, using a data set already collected and managed by the respective ministries at both national and county levels of government, removed the need for primary data collection, making the process quicker and cheaper. Second, as the expenditure data from 2015 onwards is captured in form of programme-

based budgeting, the tracking can be repeated in future and will be comparable over time. However, most of the target counties have limited breakdowns of budget information relating to dairy and horticulture food safety programmes and therefore explains the limited availability of data.

## References

- Bokeloh, G., Gerster-Bentaya, M. & Weingärtner, L. (2009). Achieving Food and Nutrition Security: Actions to Meet the Global Challenge, A Training Course Reader. InWEnt – Internationale Weiterbildung und Entwicklung gGmbH Capacity Building International, Germany
- FAO and WHO. (2003). Assuring Food Safety and Quality: Guidelines for Strengthening National Food Control Systems. FAO Food and Nutrition Paper 76. FAO, Rome, Italy.
- Gould, L.H.; Mungai, E.; Behraves, C. B. (2014); Outbreaks attributed to cheese: Differences between outbreaks caused by unpasteurized and pasteurized dairy products, United States, 1998–2011. *Foodborne Pathogens. Dis.* 2014, 11, 545–551.
- Jones, A. (2016). Tracking government expenditure on nutrition in Sierra Leone: Piloting the SUN three step approach: Oxford Policy Management Limited: United Kingdom.
- Tournas, V. H. (2005); Spoilage of Vegetable Crops by Bacteria and Fungi and Related Health Hazards, *Critical Reviews in Microbiology*, 31:1, 33-44
- Oloo, J. (2010). Food Safety and Quality Management in Kenya: An Overview of The Roles Played by Various Stakeholders; *African Journal of Food Agriculture Nutrition and Development*: Volume 10 No. 11
- Laurian J. U (2006); Food Safety as a Global Public Good: Is There Underinvestment? Plenary paper prepared for presentation at the International Association of Agricultural Economists Conference, Gold Coast, Australia, August 12-18, 2006